CLAIMS

The invention claimed is:

1. A transmission circuit comprising:

an input node for receiving an input signal;

an output node for generating thereon an output signal from the input signal;

a transmission switch coupled between the input node and the output node, the transmission switch having a control terminal and being controlled by a control voltage at the control terminal; and

a constant-voltage boosting circuit for maintaining substantially constantly the control voltage at a substantially constant value above a voltage of the input signal.

2. The circuit of claim 1, wherein

a leakage current is relatively low if the transmission switch is in an OFF state, and an integrity of the output signal is relatively high if the transmission switch is in an ON state.

3. The circuit of claim 1, wherein

the constant-voltage boosting circuit is coupled between the input node and the control terminal.

4. The circuit of claim 1, wherein

the constant-voltage boosting circuit includes a component exhibiting a characteristic voltage behavior.

5. The circuit of claim 4, wherein

the component is at least one of a diode and a MOS transistor.

6. The circuit of claim 4, wherein

the component includes a junction between two dissimilar materials, and

the characteristic voltage behavior is a voltage drop obtained across the junction.

7. The circuit of claim 1, wherein

the constant-voltage boosting circuit includes a current source and a component exhibiting a characteristic voltage difference, and

the current source is adapted to drive a current through the component.

8. The circuit of claim 1, wherein

the constant-voltage boosting circuit includes:

a preboosting circuit for boosting a voltage at a preboosting node, and

at least one electrical component coupled between the preboosting node and the control terminal.

9. The circuit of claim 1, wherein

the transmission switch exhibits a characteristic behavior that changes depending on a value of the input signal, and

the constant-voltage boosting circuit maintains the control voltage at a value above the input signal voltage that is further adjusted so as to substantially compensate for the characteristic behavior of the transmission switch.

10. The circuit of claim 9, wherein

the transmission switch includes a main NMOS transistor,

the characteristic behavior is that a threshold voltage of the main NMOS transistor changes depending on the input signal value, and

the constant-voltage boosting circuit includes a control NMOS transistor arranged so that a behavior of a threshold voltage of the control NMOS transistor substantially cancels the characteristic behavior.

11. The circuit of claim 10, wherein

the constant-voltage boosting circuit further includes a control PMOS transistor having a gate coupled to receive the input signal.

12. The circuit of claim 1, further comprising:

a calibration transmission gate coupled to the output node, and having an input node coupled to receive a calibration signal associated with the input voltage.

13. The circuit of claim 1, further comprising:

a second transmission switch coupled between the input node and a second output node.

14. A transmission gate for generating an output signal from an input signal comprising:

a switch including a gate terminal adapted to receive a control voltage, and a source terminal and a drain terminal, wherein one of the source terminal and the drain terminal is adapted to receive the input signal, and the other one of the source terminal and the drain terminal is adapted to provide the output signal thereon; and

a constant-voltage boosting circuit to generate the control voltage having substantially constantly a voltage with a substantially constant value above a voltage of the input signal.

15. The transmission gate of claim 14, wherein

the constant-voltage boosting circuit is coupled between the gate terminal and the terminal that is adapted to receive the input signal.

16. The transmission gate of claim 14, wherein

the constant-voltage boosting circuit includes a component exhibiting a characteristic voltage behavior.

17. A device comprising:

means for receiving an input voltage;

means for generating an output voltage from the input voltage;

means for regulating a preboosted voltage to generate a control voltage having substantially constantly a substantially constant value above the input voltage; and

means for applying the control voltage to control the generation of the output voltage.

18. A method comprising:

receiving an input voltage;

generating an output voltage from the input voltage;

regulating a preboosted voltage to generate a control voltage having substantially constantly a substantially constant value above the input voltage; and

applying the control voltage to control the generation of the output voltage.

19. The method of claim 18, further comprising:

pumping charge at a preboosting node to generate the preboosted voltage.

20. The method of claim 18, wherein

regulating is performed by passing a bias current through a component exhibiting a characteristic voltage difference.